



AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A sound An audio data recording/reproducing apparatus capable of editing audio sound data made up of a plurality of tracks comprising:

~~a first storage device that stores a plurality of sound data audio data, the audio data stored in said first storage device being managed dividedly as one or more partial audio data;~~

~~a second storage device that stores track data, comprising current track data and track history data, for each of a plurality of tracks, the track data for each of the tracks including information for associating at least one of the partial audio designating, as partial sound data to be reproduced in the track corresponding to the track data, at least one part of one sound data of said plurality of sound data stored in said first storage device, with the track and information for designating respective reproduction timing of the designated partial sound data managing a manner of reproducing the partial audio data associated with the track; and~~

~~a processor coupled with said first storage device and said second storage device, said processor being adapted to:~~

~~perform an editing operation for editing the current track data for a desired one of the tracks, in accordance with an editing instruction, to create new current track data; and~~

~~perform control to store the edited new current track data for the desired track in said second storage device while preserving leaving the current track data before the editing stored in said second storage device, as one of the track history data.~~

Claim 2 (currently amended): A sound An audio data recording/reproducing apparatus as claimed in claim 1 wherein the editing operation performed by said processor for editing the current track data includes editing a reproduction style of the at least one partial audio sound data associated with the track through a change, addition or deletion of data.

Claim 3 (currently amended): A sound An audio data recording/reproducing apparatus as claimed in claim 1 wherein said processor is further adapted to, in accordance with the track data stored in said second storage device, perform control to reproduce the partial audio sound data corresponding to the track data from said first storage device.

Claim 4 (currently amended): A sound An audio data recording/reproducing apparatus as claimed in claim 1 wherein the track data includes, as the information for managing the manner of reproducing the partial audio sound data, information defining one or more ranges of sound data that are to be used as a use range of one or more partial audio sound data to be used in the track and information indicative of respective reproduction timing of the one or more partial audio sound data.

Claim 5 (currently amended): A sound An audio data recording/reproducing apparatus as claimed in claim 4 wherein the editing operation for editing the current track data includes editing for changing the partial audio data, and wherein the editing for changing the partial sound audio data changes at least one of the said information defining one or more ranges of sound data that are to be used as one or more the use range of the partial sound audio data and the said information indicative of the reproduction timing of the partial audio sound data included in the track data.

Claim 6 (currently amended): A sound An audio data recording/reproducing apparatus as claimed in claim 1 wherein when an undoing instruction is given, the track history data before the editing stored in said second storage device is used as track data of the track in place of the edited new current track data.

Claim 7 (currently amended): An audio data recording/reproducing apparatus comprising:
a first storage device randomly accessible on a cluster-by-cluster basis, audio data being stored dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity are stored in each of the clusters;

a second storage device that stores track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data of at least one of the plurality of clusters to be reproduced during the sequential reproduction of the plurality of clusters based of the track data for at least one of the plurality of clusters; and

a processor coupled with said first storage device and said second storage device, said processor being adapted to:

detect if when the particular quantity of audio data indicated by the track data is less than a second data quantity in at least one of the clusters or not,

when the processor detects the particular quantity of audio data is less than the second data quantity which is smaller than the said first data quantity, combine the audio data of the one cluster with the audio data of another cluster that precedes or follows the one cluster in the reproduction order to obtain combined audio data of which data quantity is equal to or more than said second data quantity; and

store preserve the combined audio data into a in a reproducing cluster for reproducing separate from the at least one cluster in said first storage device, wherein the combined audio data stored in the cluster for reproduction is reproduced instead of the one cluster during the sequential reproduction of the plurality of clusters based on the track data said second data quantity is smaller than said first data quantity.

Claim 8 (original): An audio data recording/reproducing apparatus as claimed in claim 7 wherein said processor is further adapted to edit any one of a plurality of clusters represented by the reproduction order, said plurality of clusters including a cluster where a data quantity of the audio data to be reproduced is smaller than said second data quantity.

Claim 9 (currently amended): An audio data recording/reproducing apparatus comprising:

a first storage device randomly accessible on a cluster-by-cluster basis, audio data being stored dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity are stored in each of the clusters;

a second storage device that stores track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data ~~to be reproduced for of~~ at least one of the plurality of clusters to be reproduced during the sequential reproduction of the plurality of clusters based on the track data; and

~~a processor coupled with said first storage device and said second storage device, said processor being adapted to:~~

a reproduction device that reads out and reproduces ~~read out and reproduce~~ the audio data of the clusters from said first storage device, in accordance with the track data stored in said second storage device and in the reproduction order indicated by the track data, data; and

wherein when a reproducing cluster is prepared for a particular one of the plurality of clusters represented by the reproduction order and when the particular cluster is to be reproduced during reproduction of the plurality of clusters in the reproduction order, said reproduction device reads out and reproduces ~~read out and reproduce~~ the audio data from the reproducing cluster rather than from the particular cluster.

Claim 10 (original): An audio data recording/reproducing apparatus as claimed in claim 9 wherein when a data quantity of the particular cluster is less than said second data quantity, the reproducing cluster is used to combine the audio data of the particular cluster with the audio data of another cluster that precedes or succeeds the particular cluster in the reproduction order indicated by the track data and then preserve the combined audio data, and wherein the reproducing cluster is a cluster separate from the particular cluster and said second data quantity is smaller than said first data quantity.

Claim 11 (currently amended): An audio data recording/reproducing apparatus as claimed in claim 9 ~~wherein said processor is which further comprises an editing device that edits adapted to edit~~ any one of the plurality of clusters represented by the reproduction order, said plurality of clusters including the particular cluster.

Claim 12 (currently amended): An audio data recording/reproducing method, executed in an audio data recording/reproducing apparatus having a first storage device that stores a plurality of sound data and a second storage device that stores track data, comprising current track data and track history data for each of a plurality of tracks, the track data for each of the tracks including information for designating, as partial sound data to be reproduced in the track corresponding to the track data, at least one part of one sound data of said plurality of sound data stored in said first storage device, and information for designating respective reproduction timing of the designated partial sound data, capable of editing sound data audio data made up of a plurality of tracks comprising:

~~a step of storing audio data in a first storage device, the audio data stored in said first storage device being managed dividedly as one or more partial audio data;~~

~~a step of storing track data in a second storage device for each of a plurality of tracks, the track data for each of the tracks including information for associating at least one of the partial audio data, stored in said first storage device, with the track and information for managing a manner of reproducing the partial audio data associated with the track;~~

~~a step of editing the current track data for a desired one of the tracks, in accordance with an editing instruction, to create new current track data; and~~

~~a step of performing control to store the edited new current track data for the desired track in said second storage device while preserving leaving the current track data before the editing stored in said second storage device, as one of the track history data.~~

Claim 13 (currently amended): An audio data recording/reproducing method, executed in an audio data recording/reproducing apparatus having a first storage device randomly accessible on a cluster-by-cluster basis, audio data being stored dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity stored in each of the clusters and a second storage device that stores track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data of at least one of the plurality of clusters to be reproduced during the sequential reproduction of the plurality of clusters based on the track data, said audio data recording/reproducing method comprising:

a step of storing, in a first storage device randomly accessible on a cluster-by-cluster basis, audio data dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity are stored in each of the clusters;

a step of storing, in a second storage device, track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data to be reproduced for at least one of the plurality of clusters;

a step of, when detecting if the particular quantity of audio data indicated by the track data is less than a second data quantity in at least one of the clusters, clusters or not;

a step of, when the particular quantity of audio data is less than the second data quantity which is smaller than said first data quantity is detected by said step of detecting, combining the audio data of the one cluster with the audio data of another cluster that precedes or follows the one cluster in the reproduction order to obtain combined audio data of which data quantity is equal to or more than said second data quantity; and

a step of storing preserving the combined audio data into a in a reproducing cluster for reproduction separate from the at least one cluster in said first storage device, wherein the combined audio data stored in the cluster for reproduction is reproduced instead of the one cluster during the sequential reproduction of the plurality of clusters based on the track data said second data quantity is smaller than said first data quantity.

Claim 14 (currently amended): An audio data recording/reproducing method, executed in an audio data recording/reproducing apparatus having a first storage device randomly accessible on a cluster-by-cluster basis, audio data being stored dividedly across a plurality of clusters in such a manner that the audio data amounting to a first quantity or less than said first quantity are stored in each of the clusters and a second storage device that stores track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data of at least one of the plurality of clusters to be reproduced during the sequential reproduction of the plurality of clusters based on the track data, said audio data recording/reproducing method comprising:

~~a step of storing, in a first storage device randomly accessible on a cluster by cluster basis, audio data dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity are stored in each of the clusters;~~

~~a step of storing, in a second storage device, track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data to be reproduced for at least one of the plurality of clusters;~~

a step of reading out and reproducing the audio data of the clusters from said first storage device, in accordance with the track data stored in said second storage device and in the reproduction order indicated by the track data; and

a step of, when a reproducing cluster is prepared for a particular one of the plurality of clusters represented by the reproduction order and when the particular cluster is to be reproduced during reproduction of the plurality of clusters in the reproduction order, reading out and reproducing the audio data from the reproducing cluster rather than from the particular cluster.

Claim 15 (original): A computer program comprising computer program code means for performing all the steps of claim 12 when said program is run on a computer.

Claim 16 (original): A computer program comprising computer program code means for performing all the steps of claim 13 when said program is run on a computer.

Claim 17 (original): A computer program comprising computer program code means for performing all the steps of claim 14 when said program is run on a computer.

Claim 18 (new): An audio data recoding/reproducing apparatus capable of editing audio data made up of a plurality of tracks comprising:

a sound data storage device that stores a plurality of sound data;

a track data storage device that stores, for each of a plurality of tracks, a plurality of track data as history of editing, each of said track data including information for designating respective extraction regions of one or more partial sound data which should be extracted, as partial sound data to be reproduced in the track corresponding to the track data, from said plurality of sound data stored in said sound data storage device, and information for designating respective reproduction timing of said one or more partial sound data extracted from said plurality of sound data, said reproduction timing being represented by relative time from a performance start time point of said audio data;

a track editing device that edits current track data among the history of editing stored in said track data storage device, in accordance with an editing instruction, in such a manner that at least one of partial sound data of said current track data is modified or deleted or new partial sound data is added to said current track data, and then stores the edited current track data, as new current track data in the history of editing, in said track data storage device;

a track reproduction means that, in accordance with the current track data stored in said track data storage device, reads out and reproduces respective partial sound data of the respective extraction regions designated by the current track data from said sound data storage device, at the respective reproduction timing designated by the current track data for the respective partial sound data;

a control device that performs control to select, in accordance with an undoing instruction, the track data before the editing among the history of editing stored in said track data storage device, as current track data.

Claim 19 (new): An audio data recording/reproducing apparatus comprising:

a first storage device randomly accessible on a cluster-by-cluster basis, audio data being stored dividedly across a plurality of clusters in such a manner that the audio data amounting to a first data quantity or less than said first quantity are stored in each of the clusters;

a second storage device that stores track data indicating reproduction order of a plurality of clusters to be sequentially reproduced and a particular quantity of audio data of at least one of the plurality of clusters to be reproduced during the sequential reproduction of the plurality of clusters based on the track data;

a detecting device that detects if the particular quantity of audio data indicated by the track data is less than a second data quantity in at least one of the clusters or not,

a combining device that, when the processor detects the particular quantity of audio data is less than the second data quantity which is smaller than said first data quantity, combines the audio data of the one cluster with the audio data of another cluster that precedes or follows the one cluster in the reproduction order to obtain combined audio data of which data quantity is equal to or more than said second data quantity; and

a control device that performs a control to store the combined audio data into a cluster for reproduction separate from the at least one cluster in said first storage device, wherein the combined audio data stored in the cluster for reproduction is reproduced instead of the one cluster during the sequential reproduction of the plurality of clusters based on the track data.